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Research Article

Increasing breeding host range and fast spread across Uruguay reveals the invasion potential of *Euwallacea fornicatus* (Coleoptera, Scolytinae) in South America

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Abstract

The invasive ambrosia beetle *Euwallacea fornicatus* (Eichhoff, 1868) poses a significant threat to forests *sensu latu* in South America. Uruguay marked the third regional record since 2022, following infestations in Brazil and Argentina. The pest's distribution now spans ~ 3,500 km of coastline, highlighting its adaptability to diverse climates and the vulnerability of urban ecosystems. Currently, two infestations started in Uruguay in two foci distant 500 km of each other: Rivera, a northern city bordering with Brazil and an established beetle population in Montevideo, the capital and a port city in the southern region of the country. The infestation in Montevideo initially mirrors those in the city of Buenos Aires, Argentina, with low attack densities (< 30 attacks/tree) concentrated at lower trunk heights (< 4 m). The key host species include *Acer negundo* L., *Casuarina cunninghamiana* Miq. and *Platanus × acerifolia* (Aiton) Willd., indicating an affinity for common urban trees in the Southern Cone. This pest is known to attack 602 plant species. However, our host plant survey recorded fourteen new host plant species, with nine new breeding hosts. While tree mortality is not yet evident, gallery excavation and symbiotic fungal activity threaten tree health and tend to escalate management costs. Molecular analyses confirm the presence of a single haplotype within *E. fornicatus* species, which is phylogenetically close to Argentine, Brazilian, Chinese and European populations. The rapid spread across Uruguay along with the increasing number of hosts with breeding potential, both exotic and native in Argentina and Uruguay, highlights the significant invasion threat this species poses for South America. It is crucial to implement coordinated supranational management strategies without delay. Considering the size of the populations, they should include eradication efforts using mechanical and chemical means, followed by continuous monitoring to prevent re-emergence or re-introduction of propagules from neighbouring countries.

Resumen

El escarabajo de ambrosía invasor *Euwallacea fornicatus* (Eichhoff, 1868) representa una amenaza significativa para los bosques *sensu latu* de América del Sur. Uruguay ha sido el tercer registro regional desde el año 2022, tras las infestaciones de Brasil y Argentina. La distribución de esta plaga abarca aproximadamente 3.500 km de costa, lo que destaca su adaptabilidad a climas diversos y la vulnerabilidad de los ecosistemas urbanos. Actualmente, las infestaciones en Uruguay comenzaron en

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dos focos distantes por 500 km: Rivera, una ciudad norteña y fronteriza con Brasil, y una población de la plaga establecida en Montevideo, ciudad al sur, portuaria y capital del país. Los patrones de infestación en Montevideo reflejan los observados al inicio en la ciudad de Buenos Aires, Argentina, con densidades de ataque bajas (< 30 ataques/árbol) concentradas en las partes bajas de los troncos (<4 m). Las especies hospedantes clave incluyen *Acer negundo* L., *Casuarina cunninghamiana* Miq., y *Platanus* × *acerifolia* (Aiton) Willd., lo que indica una afinidad por árboles urbanos comunes para el Cono Sur. Esta plaga ataca a 602 especies de plantas. Sin embargo, el presente trabajo ha podido registrar catorce nuevas especies de plantas hospedadoras, con nueve hospedantes reproductivos nuevos. Si bien aún no se observa mortalidad de árboles, la excavación de galerías y la actividad fúngica simbiótica amenazan la salud de los ejemplares arbóreos y tienden a incrementar los costos de manejo. Los análisis moleculares confirman la presencia de un único haplotipo dentro de la especie *E. fornicatus*, filogenéticamente cercano a las poblaciones argentinas, brasileñas, chinas y europeas. La rápida expansión de esta especie en Uruguay, sumado al incremento de hospedantes con potencial reproductivo, tanto exóticos como nativos en Argentina y Uruguay, subraya la grave amenaza de invasión que representa para América del Sur. En consecuencia, resulta fundamental la implementación inmediata de estrategias de manejo supranacional coordinadas para mitigar su impacto. Considerando el tamaño poblacional de la plaga, deberían incluir esfuerzos de erradicación utilizando medios mecánicos y químicos, seguidos de un monitoreo continuo para prevenir la reemergencia o reintroducción de inóculos desde países vecinos.

Key words: Ambrosia beetle, host plants, invasive species, pest, PSHB, Scolytinae, Southern Cone, America

Introduction

Invasive species pose critical threats to forest ecosystems globally, disrupting biodiversity, impacting native species and altering ecosystem processes (Mack et al. 2000; Pimentel et al. 2005; Vila et al. 2011). The increasing international trade has amplified the spread of invasive species across continents, facilitating the movement and establishment of highly adaptive organisms such as ambrosia beetles from the tribe Xyleborini (Haack 2006; Aukema et al. 2010). This tribe includes some of the most successful invaders, characterised by their small size, fungus-cultivating behaviour and ability to thrive on a wide range of host trees (Jordal et al. 2001). Additionally, their reliance on sib-mating enhances their invasive potential, allowing a single or a few individuals to establish a population in a new region (Brockerhoff and Liebhold 2017; Hughes et al. 2017).

Within this group, *Euwallacea fornicatus* (Eichhoff, 1868) commonly known as the polyphagous shot hole borer (PSHB) and part of the *Euwallacea fornicatus* species complex, comprises several species with slight morphological variations that often require molecular data for accurate identification (Stouthamer et al. 2017; Gomez et al. 2018). Originally native to Asia, members of this complex are notorious for infesting both urban and natural forests and have impacted economically valuable tree species such as avocado and timber trees (Gomez et al. 2019; Ruzzier et al. 2023; Goldarazena et al. 2025). Their ability to adapt to non-native regions such as Australia, Israel, Spain, South Africa and the United States, highlights their adaptability and underscores the need for monitoring and controlling these pests in newly-affected areas (Paap et al. 2018; Schuler et al. 2023).

Reports of *E. fornicatus sensu stricto* in South America have been sparse and often fraught with identification challenges. However, recent studies employing DNA data have confirmed its presence in Argentina and Brazil (Fig. 1). In Argentina, it

causes damage to several species of urban trees in Buenos Aires such as *Populus deltoides* W. Bartram ex Marshall (Salicaceae) and *Platanus × acerifolia* (Aiton) Willd. (Platanaceae) (Ceriani-Nakamurakare et al. 2023), whereas in Brazil, it has been reported in five States, mainly damaging *Persea americana* Mill. (Lauraceae) and *Khaya grandifoliola* C.DC. (Meliaceae), as part of a nationwide survey of bark and ambrosia beetles (Covre et al. 2024). Despite extensive research in other regions, there remains a critical knowledge gap regarding host-plant relationship between *E. fornicatus* and South American native species. This deficiency hinders our understanding of the pest's impact on regional biodiversity and its invasion potential. A comprehensive host-plant assessment is therefore essential to elucidate the ecological and economic risks that this forest pest poses to South American ecosystems.

Here, for the first time, we report *E. fornicatus* in Uruguay on the basis of morphological and molecular analyses of specimens collected from urban trees in the southern and the northern regions of the country. Additionally, we expand the record of attacked native and exotic plant species that are frequently employed in urban forests along the South American region, thus providing critical information on distribution and confirmed host preferences.

Materials and methods

In March 2023, unusual symptoms on an *Acer japonicum* Thunb. (Aceraceae) known as Japanese maple were detected within the Montevideo Japanese Garden *Hei Sei En*, Uruguay (34°51'S, 56°12'W). In October 2024, the same symptoms on a decaying urban tree from *Ficus* genus (Moraceae) were reported in Rivera City, Uruguay (30°54'S, 55°30'W) (Fig. 1).

The symptoms consisted of multiple entry holes (approximately 1 mm in diameter) distributed across the trunk and main branches, with visible sawdust accumulation and sap exudation. Following initial detection, wood samples containing active galleries were collected from the affected tree. Live adult beetles were collected from the galleries and immediately preserved in absolute ethanol at -18 °C for subsequent morphological and molecular analyses. Voucher specimens were deposited in the Entomological Collection of Facultad de Agronomía, Universidad de La República. Additionally, a targeted field survey was conducted to determine the extent of infestation and distribution within key areas, including the ports, Japanese Garden, Botanical Garden and linear tree plantings featuring non-native tree species, such as *Platanus × acerifolia*, *Acer japonicum*, *Acer negundo* L. (Aceraceae), *Casuarina cunninghamiana* Miq. (Casuarinaceae) and *Populus* spp. L. (Salicaceae).

Taxonomic identification was based on direct observation using a Leica M205A stereomicroscope. Elytra and pronotum lengths were measured from base to apex in lateral view, diagnostic characters for the *Euwallacea fornicatus* species complex (Gomez et al. 2018; Smith et al. 2019). Additionally, DNA extraction was conducted following the methods of Gomez et al. (2018). The mitochondrial gene cytochrome oxidase c subunit I (COI) was amplified through PCR using the primer pair COI_1455b and COI_r750 (Smith and Cognato 2014). The PCR and thermocycling conditions were as reported in Gomez et al. (2018) and the amplified products were sequenced by Macrogen (Korea). The sequencing data were assembled, trimmed and compared with the DNA sequence alignment in Ceriani-Nakamurakare et al. (2023) with the addition of Brazilian data (Covre et al. 2024), which represent the most recent and comprehensive alignments available

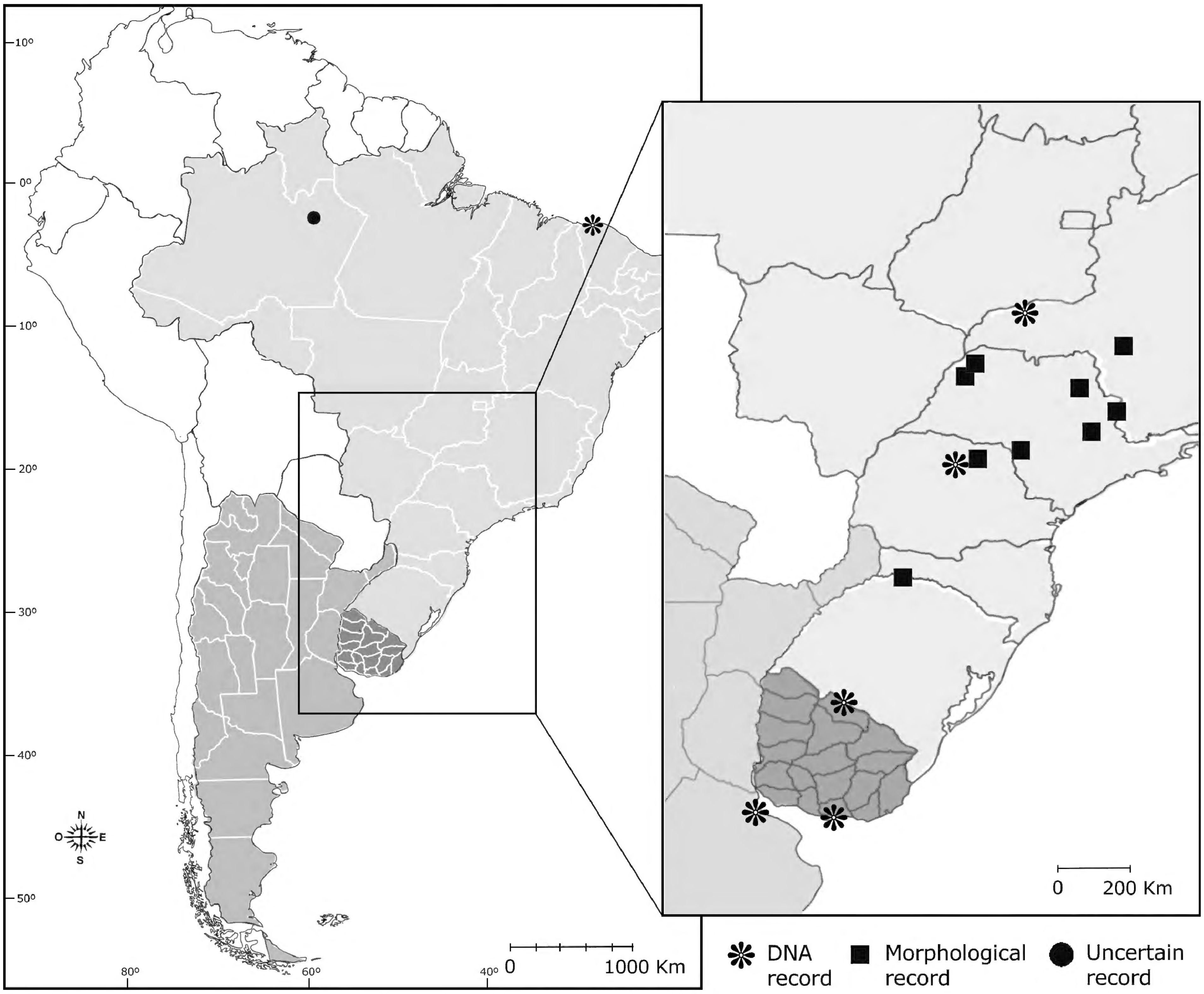

Figure 1. South American geographic distribution of *Euwallacea fornicatus*. an Asterisk samples from which DNA was studied; black circle uncertain historical record (Wood 2007); and black rectangle records confirmed through non-molecular methods.

for the *E. fornicatus* species complex in South America. The COI sequence was deposited in GenBank under accession number (PQ667063) for both Montevideo and Rivera specimens (i.e. 100% identity).

A survey of the host plant range of *E. fornicatus* was conducted from 2024 to 2025 at the Carlos Thays Botanical Garden, Buenos Aires, Argentina. Sampling efforts focused on plant stems and branches up to 2.5 m above the ground. Attacked plant tissues were collected and analysed in the laboratory to confirm the identity of the beetle and to determine its reproductive status by assessing the presence of larvae or pupae. When plant material could not be obtained to verify direct evidence of breeding, larval sawdust and emerging adults were used as alternative indicators. The novelty status of each species was assessed using EPPO (2025). Suppl. material 1 compiles the importance of each plant species, categorised into six categories based on its primary relevance: Academic (A), representing its value for research and education; Consumable (C), indicating its use in food, medicinal or pharmaceutical contexts; Symbolic (S), for religious, cultural or spiritual significance; Material (M), related to industrial or commercial applications; Ornamental (O), referring to its aesthetic or landscaping uses; and Ecological (E), for roles in conservation, ecosystem functions or niche building. Species with undocumented

or poorly understood uses were classified as Undefined (U). Additionally, the status of each plant species within the Argentinean and Uruguayan flora was determined as native or exotic and the conservation status was determined following IUCN Categories and Criteria (IUCN 2025) i.e. species were classified as Not Evaluated (NE), Data Deficient (DD), Least Concern (LC), Near Threatened (NT), Vulnerable (VU), Endangered (EN), Critically Endangered (CR) or Extinct in the Wild (EW) based on available risk assessments.

Results

The number of attacks per individual tree in affected areas was fewer than thirty for the species *A. negundo*, *C. cunninghamiana* and *P.* × *acerifolia*. The symptoms of infestation are quite conspicuous (Fig. 2). In *A. negundo* and *P.* × *acerifolia*, re-infestation was observed, indicating an attack pattern consistent with previous findings (Ceriani-Nakamurakare et al. 2023).

Molecular analysis of the specimens from Montevideo and Rivera cities revealed high genetic similarity, with nearly 100% sequence identity to specimens from Argentina (GenBank: OR016051) and Brazil (GenBank: OR773079, OR773081). Both specimens from Uruguay exhibited 100% identity and only one base difference when compared to the sequence from Buenos Aires, Argentina and from Ceará and Paraná, Brazil. In contrast, two base differences were observed compared with the sequence from Minas Gerais, Brazil (GenBank: OR773080). Phylogenetic analyses indicated remarkable genetic conservation, with the sequence clustering closely with specimens previously collected in China and recently identified in European greenhouses (99.4–99.8% identity) (Fig. 3).

Our host plant survey revealed fourteen novel species for *E. fornicatus* (Table 1), including representatives from five newly-documented genera: *Araucaria* (Araucariaceae), *Geoffroea* (Fabaceae), *Blepharocalyx* and *Feijoa* (Myrtaceae) and *Gardenia* (Rubiaceae). In addition, it is the first record for Araucariaceae family and provides the first evidence of successful breeding in two previously reported non-reproductive host plants: *Ceiba speciosa* (A.St.-Hil., A.Juss. & Cambess.) Ravenna (Ebenaceae) and *Fraxinus excelsior* L. (Oleaceae). Amongst these novel associations, nine species were confirmed as breeding hosts from which six are native species (67%). The identified host plants play multiple ecological and economic functions (see Suppl. material 1) and show that twelve species have consumable uses (C), five possess ornamental value (O) and several species demonstrated additional importance categories. According to IUCN Red List Criteria, most species are classified as Least Concern (LC), while *Ficus aspera* G.Forst. (Moraceae) and *F. excelsior* are categorised as Near Threatened (NT) and *Brugmansia* × *candida* Pers. (Solanaceae) is listed as Extinct in the Wild (EW).

Discussion

The detection of *Euwallacea fornicatus* in Uruguay represents the third confirmed record in South America within a remarkably short period of time (2021–2024), suggesting rapid invasion and establishment throughout the region. The spatial epidemiological pattern in Uruguay suggests a multipoint invasion scenario with two distinct stages: one in the northern border city of Rivera and the other in the southern port city of Montevideo.

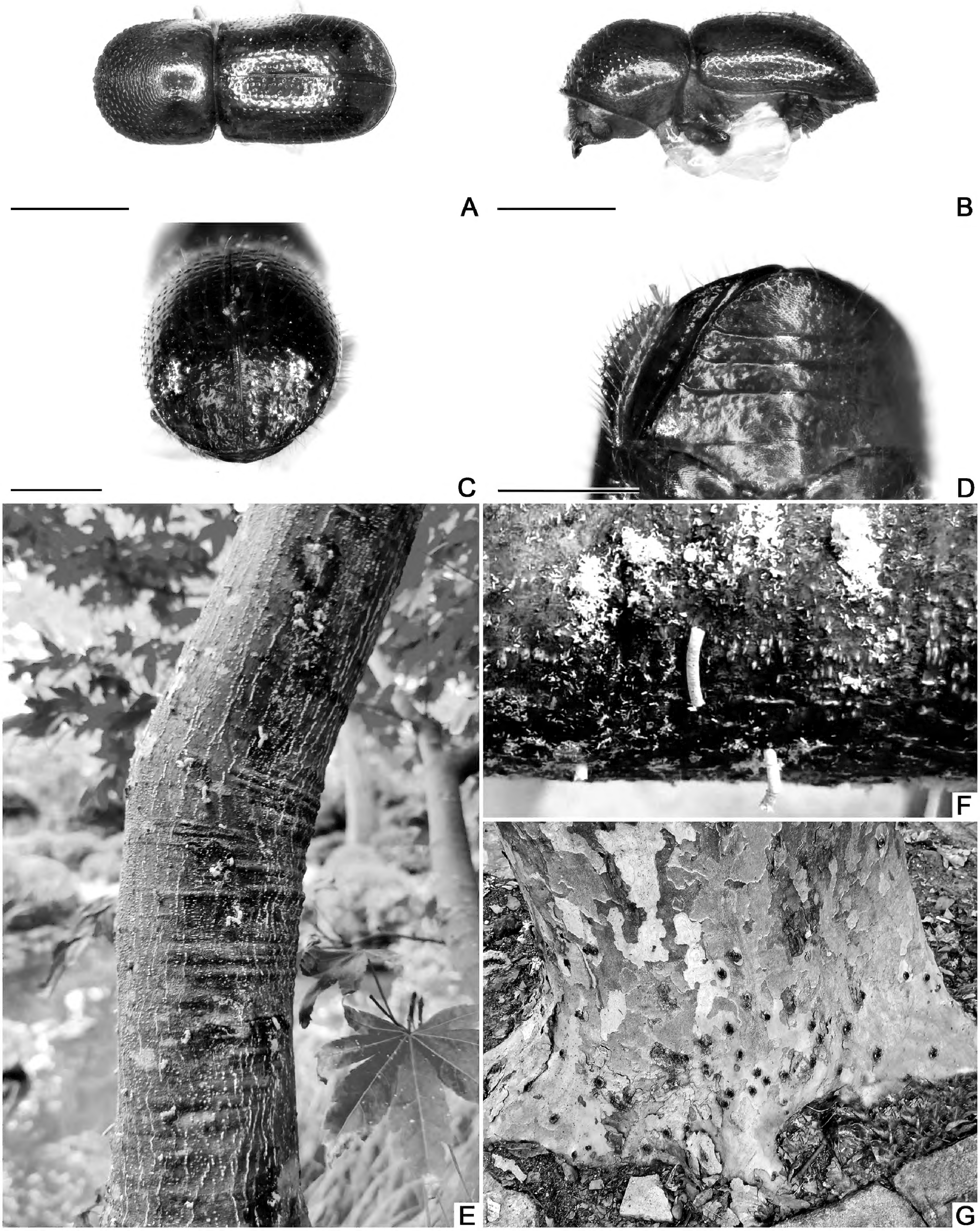

Figure 2. Morphology and symptoms of *Euwallacea fornicatus* **A–D** female specimen from Montevideo, Uruguay, showing dorsal, lateral, elytral declivity and protibial dentation views **E, F** symptoms caused by *E. fornicatus* on *Acer japonicum* **G** on *Platanus* × *acerifolia*. Scale bars: 1.00 mm (**A, B**); 0.50 mm (**C, D**). Pictures by M. Bollazzi.

Table 1. Host plant species attacked by *Euwallacea fornicatus* in Argentina, Brazil and Uruguay, including their novelty and breeding status.

Genus and Species	Author citation	Novelty status	Breeding Host	Native or Exotic (N/E)	Reference
Acacia mangium	Willd.	-	✓	E	Brazil[4]
Acer japonicum	Thunb.	-	✓	E	Argentina[3]
Acer negundo	L.	-	✓	E	Argentina[3]
Albizia julibrissin	Durazz.	-	✓	E	Argentina[3]
Araucaria columnaris	(J.R.Forst.) Hook.	new	X	E	present work
Bauhinia forficata	Link	new	✓	N	present work
Blepharocalyx salicifolius	(Kunth) O.Berg	new	X	N	present work
Brachychiton populneus	(Schott & Endl.) R.Br.	-	✓	E	Argentina[3]
Brugmansia × *candida*	Pers.	new	X	E	present work
Casuarina cunninghamiana	Miq.	-	✓	E	Argentina[3]
Ceiba speciosa	(A.St.-Hil., A.Juss. & Cambess.) Ravenna	known[1]	✓ (new)	N	present work
Celtis tala	Gillies ex Planch.	new	X	N	present work
Diospyros inconstans	Jacq.	new	✓	N	present work
Feijoa sellowiana	(O.Berg) O.Berg	new	X	N	present work
Ficus aspera	G.Forst.	new	✓	E	present work
Ficus religiosa	L.	new	X	E	present work
Fraxinus excelsior	L.	known[2]	✓ (new)	E	present work
Fraxinus sp.	Tourn. ex L.	-	unknown	E	Argentina[3]
Gardenia thunbergia	Thunb.	new	✓	E	present work
Geoffroea decorticans	(Gillies ex Hook. & Arn.) Burkart	new	✓	N	present work
Inga uraguensis	Hook. & Arn.	-	X	N	Argentina[3]
Inga vera	Willd.	-	X	E	Argentina[3]
Khaya grandifoliola	C.DC.	-	unknown	E	Brazil[4]
Morus alba	L.	-	✓	N	Argentina[3]
Myrsine laetevirens	(Mez) Arechav.	new	✓	N	present work
Neltuma caldenia	(Burkart) C.E.Hughes & G.P.Lewis	new	✓	N	present work
Persea americana	Mill.	-	✓	E	Brazil[4]
Platanus × *hispanica*	Mill. ex Münchh.	-	✓	E	Argentina[3]
Populus deltoides	W.Bartram ex Marshall	-	✓	E	Argentina[3]
Schinus longifolia	(Lindl.) Speg.	-	✓	N	Argentina[3]
Solanum granulosoleprosum	Dunal	-	✓	N	Argentina[3]
Solanum mauritianum	Scop.	-	✓	N	Brazil[4]
Tipuana tipu	(Benth.) Kuntze	-	X	N	Argentina[3]
Toona ciliata	M.Roem.	-	✓	E	Brazil[4]
Trichilia glabra	L.	new	X	E	present work

Notes. Recorded host plant species being attacked by *Euwallacea fornicatus* at the South American sentinel Botanical Garden "C. Thays" in Buenos Aires, Argentina. [1] Mendel et al. (2021). [2] van Rooyen et al. (2021). [3] Ceriani-Nakamurakare et al. (2023). [4] Covre et al. (2024).

In the northern region, the cross-border city of Rivera and its Brazilian counterpart, Santana do Livramento, form a binational urban agglomeration of approximately 250,000 inhabitants and a shared 12 km "dry border", i.e. a city street that serves as a geopolitical border. This dynamic border facilitates the daily movement of goods, people and, inadvertently, biological materials. Despite existing phytosanitary controls, limited resources prevent effective detection of inconspicuous pests such as *E. fornicatus*. Given its known presence in multiple nearby Brazilian localities (Covre et al. 2024), it is plausible that populations of this pest have

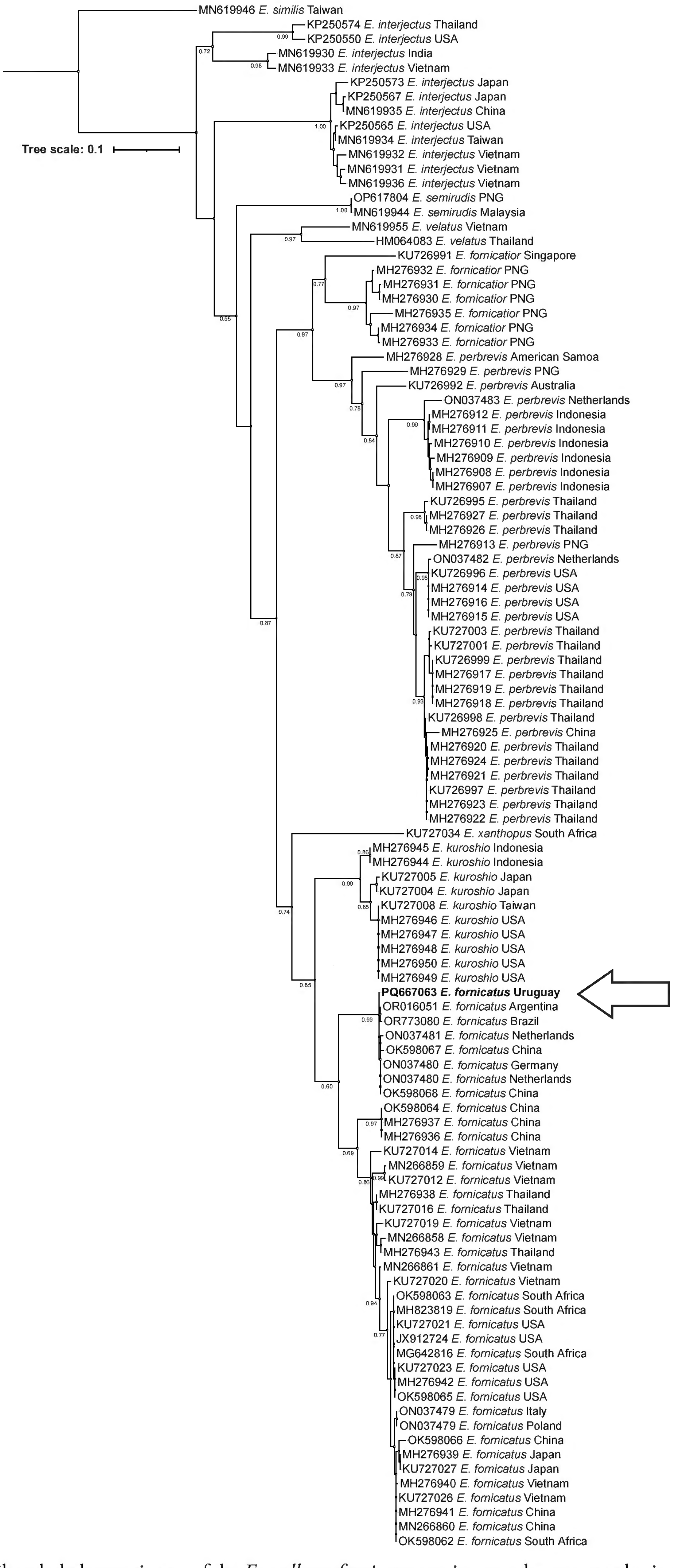

Figure 3. Maximum Likelihood phylogenetic tree of the *Euwallacea fornicatus* species complex generated using the general time-reversible model with bootstrap support values (1000 replicates). A distinctive arrow marks the phylogenetic position of the Uruguayan specimens.

expanded into the northern region of Uruguay through natural dispersion and/or accidental transport. Although Montevideo's population could potentially serve as an inoculum source for Rivera's invasion, the absence of symptoms on urban trees along National Route 5, the main connecting corridor, does not support this.

In contrast, the establishment of *E. fornicatus* in the southern city of Montevideo, detected in March 2023, suggests a different invasion pathway, likely related to maritime trade. Montevideo, a major port city and the capital of Uruguay, serves as an important entry point for global trade. The infestation pattern observed in this city is strikingly similar to the initial stages reported in the city of Buenos Aires, characterised by low attack densities (< 30 entry holes per tree) and concentrations at lower altitudes (< 4 m). Based on the infestation levels observed in sentinel species such as *A. negundo*, the pest may have arrived between the years 2021 and 2022.

The spatial distribution pattern of this quarantine pest within South America shows an extensive distribution spanning approximately 3,500 km of coastline and encompassing diverse climatic zones, due to at least three distinct invasive propagules that may have established independent transmission clusters throughout the Southern Cone. The temporal pattern of these introductions suggests initial establishment in Brazil within the last decade, followed by more recent colonisation events in Argentina and Uruguay, both within the last five years. The detection pattern particularly emphasises the relevance of urban forests *sensu latu* as critical surveillance points for monitoring invasive forest pests. These urban landscapes have effectively served as sentinel networks across the region, enabling early detection and tracking of the pest's spread. The considerable distance between infested localities and major ports of entry suggests that secondary dispersal mechanisms, potentially including human-mediated transport, may play a crucial role in the pest's regional expansion. Management experience from other invaded regions suggests a narrow window of opportunity for effective response and eradication, as it becomes increasingly complex over time [see Paap et al. (2018) and Cook and Broughton (2023)].

Our molecular analyses revealed the presence of a single species of the *E. fornicatus* complex, with COI data aligning with those reported by Ceriani-Nakamurakare et al. (2023) and Covre et al. (2024). Phylogenetic characterisation of the South American populations suggests the presence of a distinct haplotype in this region, with limited genetic similarity (92.2% identity) to invasive populations in other subtropical regions, including South Africa, California and Israel. Instead, the South American specimens demonstrate remarkable genetic affinity (99.4–99.8% identity) with populations from China (Hainan) and recent greenhouse introductions in Europe (Netherlands and Germany). This genetic distinctiveness, coupled with the observed geographic expansion within South America, suggests a unique invasion history and potentially different ecological dynamics compared to other invaded regions. In addition, the existence of novel hosts, pose the question on short- and long-term impacts in the region.

The reported expansion of host plant utilisation by *E. fornicatus* in South America demonstrates its remarkable adaptability and potential impact on regional ecosystems. Our survey revealed fourteen novel host associations across five previously unreported genera, with confirmed breeding activity in nine of these species, in addition to the 602 hosts previously reported at an international level (EPPO 2025). This substantial increase in host species, including the confirmation of breeding in previously reported hosts (*C. speciosa* and *F. excelsior*), suggests a concerning pattern of host range expansion. The surveyed trees were located within the Carlos

Thays Botanical Garden, Buenos Aires, an urban setting where plants are subject to natural environmental conditions. While a formal assessment of plant health (e.g. physiological stress indicators) was not conducted, infestations were observed in both apparently healthy and visibly stressed trees, suggesting that *E. fornicatus* is not strictly limited to weakened hosts in this environment. The pest's remarkable host breadth is particularly noteworthy, given that the identified hosts represent a diverse array of plant families, including both native and exotic species to the region. The fact that native species have been confirmed to be reproductive hosts adds scale to the problem and creates a trade-off for regional pest management. Native species reported as reproductive in the present work extend their distribution beyond human-modified landscapes into natural ecosystems and across neighbouring countries, shaping natural corridors for pest expansion. In addition, native species are an integral part of natural protected areas in regions that are difficult to access and where significant sanitary interventions may not be feasible.

The economic and cultural implications of these findings are amplified by the utilitarian profile of the novel attacked plant species, with eleven species having consumable uses and five serving ornamental purposes, combined with their various symbolic, material and ecological functions and the pest's capability to colonise threatened species (e.g. *F. aspera* and *F. excelsior*, both near threatened as IUCN criteria). The economic consequences of *E. fornicatus* establishment in South America could be substantial, based on experiences from other invaded regions. In Australia, for instance, an eradication scenario involving the removal of infected trees has necessitated an estimated economic investment of approximately ten million US dollars annually for a period of at least three consecutive years (Cook and Broughton 2023). While there have been no reported cases of mortality in affected trees in Montevideo or Rivera, the structural damage caused by gallery excavation and the potential impact of its symbiotic fungi pose significant risks to urban forest health and management costs. This is particularly evident in the urban environments of Montevideo, where it is successfully established on *A. negundo*, *C. cunninghamiana* and *P.* × *acerifolia*. The vertical spread of infestations, as seen in Buenos Aires, Argentina, particularly in *P.* × *acerifolia* up to 16 m height, represents additional challenges for surveillance and control in urban settings, where trees are integrated within complex infrastructure networks.

The significant phytosanitary implications for economically pivotal tree species, including Poplar, Pecan and Avocado, amongst numerous others, underscore the need for a coordinated regional ecological management strategy. The geographical distribution of *E. fornicatus* across the Southern Cone epidemiological landscape underscores the following fundamental needs to be addressed: i) the implementation of robust early detection mechanisms through systematic urban forest and botanical garden surveillance; ii) the standardisation of regional monitoring protocols to ensure comprehensive and comparable data collection; iii) the development of targeted preventative interventions in identified high-risk ecological zones; (iv) the establishment if dynamic, multilateral communication infrastructures between affected nations; and (v) the strategical allocation of research resources to comprehensively evaluate local ecological impacts and develop adaptive control strategies. Currently, this invasive species remains critically under-recognised within South American phytosanitary frameworks and public consciousness, despite its potential to function as a significant ecosystem driver capable of substantially modifying both native and non-native biodiversity dynamics.

Conclusion

The invasion of *E. fornicatus* in South America highlights its rapid spread, host adaptability and unknown introduction pathways, posing significant risks to forestry and biodiversity. The molecular data from Uruguay reveal high genetic similarity to samples from Argentina, Brazil, China (Hainan) and greenhouses in Europe (Netherlands and Germany). The pest's expanding host range, now including fourteen previously undocumented species, emphasises its ecological flexibility and the vulnerability of urban forests and ports as invasion hubs. Shared borders, like in the Rivera-Santana do Livramento complex, may facilitate pest movement despite phytosanitary measures. Coordinated regional actions, including standardised monitoring, early detection and collaborative management, are urgently required to mitigate its growing ecological and economic impacts.

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Additional information

Conflict of interest

The authors have declared that no competing interests exist.

Ethical statement

No ethical statement was reported.

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Author contributions

Esteban Ceriani-Nakamurakare (ECN), Demian F. Gomez (DFG), Ana Trebino (AT), Andrea Listre (AL), Luciana Ingaramo (LI), Agustina Armand Pilón (AAP) and Martin Bollazzi (MB) contributed significantly to the development of this work. Conceptual and methodological work was led by ECN, DFG, AT, AAP and MB. Data curation, formal analysis, investigation and visualisation were primarily performed by ECN, AT, AAP and MB. Funding acquisition was led by ECN and MB, whereas resources were provided by ECN, LI, AL and MB. The original draft was prepared by ECN, DFG and MB, with all the authors contributing to the review and editing process.

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Data availability

All of the data that support the findings of this study are available in the main text or Supplementary Information.

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Supplementary material 1

Host plant species attacked by *Euwallacea fornicatus* in Argentina, Brazil and Uruguay, including their breeding status, socioeconomic relevance, and IUCN conservation status

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